

Table S1. Demographic and clinical characteristics.

	AD (n = 7)	Healthy control (n = 7)	P-value	
Age	28.29 ± 7.41	29.57 ± 2.82	0.68	
Sex			1.00	
Male	5 (71.42)	5 (71.42)		
Female	2 (28.58)	2 (28.58)		
BMI (kg/m²)	26.06 ± 2.05	22.95 ± 1.17	0.21	
EASI	24.31 ± 3.91	0	<0.001	
Eosinophil (%)	6.74 ± 1.48	1.02 ± 0.15	0.008	
Total IgE	1246.57 ± 350.29	33.14 ± 6.47	0.013	
	Lesional skin	Non-lesional skin		
TEWL	32.14 ± 2.88	19.31 ± 3.62	12.22 ± 2.54	<0.001
Erythema index (AU)	396.66 ± 54.57	229.33 ± 44.09	183.95 ± 28.92	0.007
pH	5.72 ± 0.26	5.45 ± 1.99	5.32 ± 0.10	0.359

Data are expressed as the mean ± standard deviation or number (percentage).
Abbreviations: AD, atopic dermatitis; AU, arbitrary unit; EASI, eczema area severity index; HC, healthy control; IGA, investigators global assessment; NRS, numerical rating scale.

Table S2. Summary of total read counts for sequence reads.

Group/Sample No.	Total read count
AD-L-2-S001	179,624
AD-L-7-S001	147,778
AD-L-6-S001	214,274
AD-L-9-S001	174,120
AD-L-10-S001	160,274
AD-L-11-S001	179,486
AD-L-14-S001	195,670
AD-C-2-S001	206,386
AD-C-6-S001	174,288
AD-C-7-S001	157,710
AD-C-9-S001	192,112
AD-C-10-S001	205,328
AD-C-11-S001	163,698
AD-C-14-S001	171,130
HC-C-1-S001	181,880
HC-C-4-S001	164,308
HC-C-5-S001	151,156
HC-C-7-S001	160,524
HC-C-8-S001	203,744
HC-C-9-S001	185,980
HC-C-10-S001	276,084